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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,101

01/28/2004

Shigeru Hosoe

02860.0767

9703

22852 7590 02/07/2007

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EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/765,101	Applicant(s) HOSOE, SHIGERU	
	Examiner Jason L. Lazorcik	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 2 and 7-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-17 drawn to a conveying apparatus in the reply filed on January 4, 2007 is acknowledged.

Claim Objections

Claims 2, and 7-14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. None of the cited claims provide further structural limitations upon the parent drawn to a conveyance apparatus.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

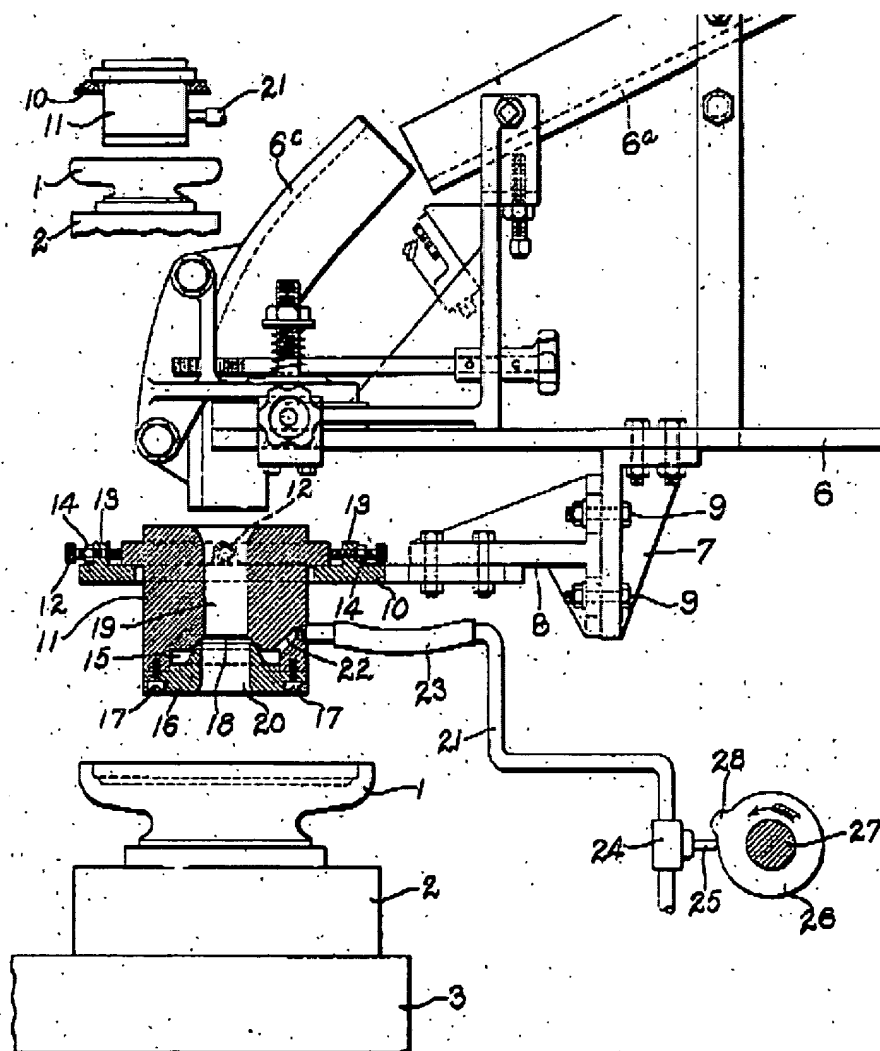
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1- 3, 5, 7, 11, 12, and 15** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hunter (US 1,755,397). Regarding **Claim 1** and with particular reference to the excerpt figure 1 from the instant reference, Hunter is understood to disclose a supporting decide (11) having a through hole (19) passing in a gravity

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direction for the support of a glass material in a fluid or semi-fluid condition. The reference teaches that a charge is dropped vertically downward into the through hole (pg 2, Lines 20-44), Retarding or stopping the fall of the glass in a non contact fashion (Pg 1, Line 71 to Pg 2, line 9), and dropping the glass material from the lower end of the through hole into a mold "suitable for the manufacture of flat glass...by a pressing process" (Pg 2, Lines 9-19). As is clearly depicted in the following image, the supporting device is characterized by a "tapered section which increases in diameter from its base to its top" in the upper or top section of the through hole (**Claim 15**)



The reference continues by teaching the use of "hot air... which serves not only to retard the passage of the charge through the guiding member (11) but also to minimize the loss of heat therefrom to the surrounding atmosphere". Hunter's reference to the supply of hot air is understood to provide for at least some measure of temperature control over the fluid delivered from the supplying device (**Claim 2**) and therefore implicitly requires a means or device to control the temperature of the supplied air (**Claim 3**). The reference further teaches that the device provides "an enveloping film of gas surrounding the charge as it falls, which tends to prevent the charge contacting with the side walls of the guiding member" (Pg 2, line 97 to Pg 3, Line 5) (**Claim 5**). Further, the prior art teaches that the glass charge is delivered to a "pressing process" or to "a molding die of a molding device" (**Claim 11**) explicitly for the production of an automobile headlight lens or "an optical glass" (**Claim 7, 12**). With respect to **claim 16**, the instant reference teaches the use of an annular nozzle or equivalently a series of upwardly directed ports communicating between the annular groove and the through hole (page 2, Lines 83-89).

Irrespective of the rejections of claims 2, 7, and 11-12 as being anticipated by the Hunter reference, it is the Examiners position that claims 2 and 7-14 provide no further structural limitation upon the parent claims drawn to the conveying apparatus. Therefore absent any compelling evidence to the contrary, the apparatus disclosed by Hunter is understood to be fully capable of performing the claimed limitations as set forth in claims 2 and 7-14.

Claim Rejections - 35 USC § 103

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter (US 1,755,397) as applied to Claim 1 under 35 U.S.C. 102(b) above.

With respect to claim 4, Hunter teaches the use of “hot air or other gas” as a means to support the glass gob as well a means to “minimize the loss of heat (from the glass gob) to the surrounding atmosphere” (Pg 2, lines121-126). The instant reference is silent regarding the inclusion of a “heater and a thermal sensor which are arranged in a supplying path of the fluid”. Absent any unexpected results to the contrary, one having no more than an ordinary level of skill in the art at the time of the invention who was aware of the Hunter disclosure would have been able to arrive at the claimed device structure. Specifically, combining a heating element in communication with the supply fluid (e.g. in a supply path of the fluid) and a temperature sensor as part of a controlling means for said heating element would have been an obvious choice for anyone of ordinary skill seeking to control or optimize the supplied “hot air” in the process as disclosed by Hunter.

Regarding claim 6, although the Hunter apparatus fails to specifically provide for a shutter member as set forth in the instant claim, the inclusion of a shutter in the instant apparatus would have been obvious to one of ordinary skill in the art at the time of the invention. Specifically, the addition of a movable shutter at the lower end of the through hole would have been an obvious addition to one of ordinary skill seeking to avoid inadvertent discharge of the molten gob. For at least this reason, the instant claim wherein a shutter member for closing at least a portion of the through hole is located

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lower than a position through which the fluid is supplied into the through hole is held *prima facie* obvious over the prior art apparatus as disclosed by Hunter.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter as applied to claim 1 above, and further in view of Hirota (US 5,762,673). With respect to the above disclosed apparatus, Hunter discloses that "While I have shown an annular nozzle for directing the charge retarding fluid upwardly, I contemplate any and all equivalents of this construction, such for example as a series of upwardly directed ports communicating between the central aperture and the annular chamber (15)" (Pg 2, Lines 83-89). Hunter is silent regarding the specific limitation wherein a porous material is arranged along the inner annular surface of the through hole (Claim 16) or that said porous material should be formed from graphite (Claim 17).

In a closely related piece of art, Hirota teaches a method and apparatus whereby a hot gob of glass is suspended by an air blast or a "gaseous stream" prior to molding. Hirota teaches that "If the gaseous stream is locally irregularly concentrated at the lower central part of the glass gob, the glass gob will be undesirably deformed...In order to avoid the occurrence of such deformation, the gaseous stream may be spouted through a plurality of orifices to suppress the local concentration of the gaseous stream". In another passage (Column 7, lines 31-39), Hirota teaches that the materials of construction for the floating apparatus, while not specifically limited, should exhibit sufficient heat resistance should the glass gob contact the device during the floating process. Further, the instant reference specifically advocates the use of carbon as a preferred heat resistant material.

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In view of the Hirota disclosure, it would have been obvious for one of ordinary skill in the art at the time of the invention to utilize a porous barrier constructed of a carbon based material in the Hunter apparatus. The use of a porous material would have been an obvious approach to a providing the "plurality of orifices" in order to suppress the local concentration of the gaseous stream in the manner taught by Hirota. Further, it would have been obvious in accord with Hirota's teachings to construct the barrier of a porous carbon or a graphite material in order to provide a sufficient heat resistance for the material. The Hirota modifications would have been obvious to one seeking to minimize glass gob deformation while providing sufficient heat resistance in a device according to the Hunter disclosure.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL


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